

Hot Springs National Park, Bathhouse Row:
Hale Bathhouse: Mechanical & Piping Systems
One Mile North of US Highway 70
on State Highway 7
Hot Springs National Park
Garland County
Arkansas

HAER NO. AR-4-B

HAER
ARK,
26-HOSP,
3-B-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
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HISTORIC AMERICAN ENGINEERING RECORD

HOT SPRINGS NATIONAL PARK, BATHHOUSE ROW:
HALE BATHHOUSE: MECHANICAL AND PIPING SYSTEMS

HAER NO. AR-4-B

Location: Hot Springs National Park, Garland County,
Arkansas. One mile north of US Highway 70
on State Highway 7 (Central Avenue).

Date of Construction: 1915 (renovated)

Present Owner: National Park Service

Present Use: Presently vacant.

Significance: The Hale Bathhouse is part of Bathhouse
Row, which represents a typical American
Spa. The spring piping, heating and
ventilation systems are examples of early
twentieth century state-of-the-art
technology.

Historian: Diana Prideaux-Brune
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[See HAER No. AR-4 for an overview history of Bathhouse Row.]

[See HABS No. AR-28 (A through I) for documentation of the architectural
features of the bathhouses on Bathhouse Row.]

The heating and ventilation system in the Hale was similar to that of the Buckstaff, and marks architects Mann and Stern's first design of a bathhouse mechanical system. A Sirocco #6 blower, designed to exchange full air volume four times an hour, drew outside air through a sheet-metal duct to tempering coils and by-pass. The by-pass was left open, no dampers being used. Two squirrel-cage blowers then forced the tempered air through heating coils and by-pass to flues regulated by automatic mixing dampers. Johnson pneumatic thermostats controlled the draft regulators in the plenum. A few of the original thermostats are extant.

The Hale was converted to a theater not long after its closing as a bathhouse in the 1970s. A number of interior modifications were made at that time, and on the men's side of the bathhouse, little evidence remains of the original mechanical systems. It does appear, however, that the heat registers were located in the ceiling of most rooms. Correspondence at the time of construction describe the registers as being located eight feet from floor level. No system of return air was used, and release of vitiated air was accomplished through a few ducts, presumably augmented by windows. The forced-air system was augmented by floor radiators in most rooms.

MECHANICAL EQUIPMENT INVENTORY

BOILERS:

Two upright, sectional, cast iron boilers 5 1/2 feet long, 5 feet high, supply steam to direct heating radiators and to heating coils in the blower. The boilers have been both oil and gas fired. Headers arranged so boilers can work separately or in tandem.

Pierce American "Coarse Grate"
Butler Manufacturing Co.
American Radiator boiler gauge
Johnson Service Co. boiler gauge

CONDENSATE RETURN:

A vacuum system returns condensate from the heating coils and radiators to the boiler. Pressure and water levels monitored by valves.

Hoffman-Economy vacuum pump

BLOWER:

The blower chamber and plenum are constructed of sheet metal on a concrete foundation. Blower of squirrel-cage type, 32-inch diameter. First patent: 1900. Tempered and heated air is directed by sheet-metal dividers within the blower chamber and plenum. The blower forces heated air to the various zones of the building.

Sirocco #6 Blower
American Blower Co.
General Electric induction motor
Model #: 5K4254B3
5 HP

TEMPERATURE CONTROL:

The pneumatic system controls the dampers of the forced-air system, and all radiators. The compressor for the system is not evident.

Thermostats:
Johnson Regulator Co.

RADIATORS:

Radiators with two pipes for condensate return and steam supply.

THERMAL WATER FLOW METER:

Bristol Metering Equipment
Meta-Flowmeter
6 psi line pressure

[See HAER No. AR-4 for bibliography.]